



DEPARTMENT OF TRANSPORTATION  
HAZARDOUS MATERIALS REGULATIONS BOARD  
WASHINGTON, D.C. 20590

18323

[ 49 CFR Part 177 ]

[Docket No. HM-65; Notice No. 70-21]

TRANSPORTATION OF HAZARDOUS  
MATERIALS

**Bonding and Grounding Flammable  
Liquid Cargo Tanks**

The Hazardous Materials Regulations Board is considering amending the Department's Hazardous Materials Regulations to provide specific requirements for bonding and grounding cargo tanks prior to and during transfer of lading. At the same time it is proposed to clarify the provisions for the transfer of flammable liquids while the motor vehicle engine is running.

This proposal is based upon a petition submitted by the American Petroleum Institute to more clearly define the present grounding and bonding requirements in 49 CFR 177.837(b). The petitioner contends that the existing requirements more appropriately apply to small containers (e.g., barrels, drums, portable tanks, etc.) and that there is a need to establish more extensive safety procedures commensurate with industry practices, especially with respect to bonding of cargo tanks while unloading flammable liquids into inherently grounded tanks.

The Board believes that the petition has merit and that safety in transportation will be enhanced by the prescription of more specific and meaningful requirements to safeguard against the ignition of flammable vapors by static electricity.

In consideration of the foregoing, it is proposed to amend 49 CFR Part 177 as follows:

In § 177.837, paragraph (a) and the first sentence of paragraph (b) would be amended; paragraphs (c) and (d) would be redesignated paragraphs (d) and (e) respectively; a new paragraph (c) would be added as follows:

**§ 177.837 Flammable liquids.**

(See also § 177.834 (a) to (k).)

(a) *Engine stopped.* Unless the engine of the motor vehicle is to be used for the operation of a pump, no flammable liquid shall be loaded into, or on, or unloaded from any motor vehicle while the engine is running.

(b) *Bonding and grounding containers other than cargo tanks prior to and during transfer of lading.* \* \* \*

(c) *Bonding and grounding cargo tanks prior to and during transfer of lading.* (1) When cargo tanks are loaded or unloaded through open filling holes, one end of a bond wire shall be con-

nected to the stationary system piping or integrally connected steel framing, and the other end to the shell of the cargo tank so as to provide a continuous electrical connection. (If bonding is to the framing, it is essential that piping and framing be electrically interconnected.) This connection must be made before any filling hole is opened, and must remain in place until after the last filling hole has been closed. Additional bond wires are not needed around all-metal flexible or swivel joints, but are required for nonmetallic flexible connections in the stationary system piping.

(2) Bonding or grounding is not required when cargo tanks are loaded through vapor-tight (not open hole) top or bottom connections.

(3) An external bond wire or bond wire integral with a hose is required for the unloading of flammable liquids into tanks or other containers by means of nonvapor-tight connection between the hose and the container. If the container to be filled has previously contained a flammable liquid, such wire must be at least momentarily grounded to that container before the hose fitting is brought into proximity to the fill hole. Bonding must be continuous during the transfer operation.

\* \* \*  
Interested persons are invited to give their views on this proposal. Communications should identify the docket number and be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, 400 Sixth Street SW., Washington, DC 20590. Communications received on or before February 9, 1971, will be considered before final action is taken on the proposal. All comments received will be available for examination by interested persons at the Office of the Secretary, Hazardous Materials Regulations Board, both before and after the closing date for comments.

This proposal is made under the authority of sections 831-835 of title 18, United States Code, and section 9 of the Department of Transportation Act (49 U.S.C. 1657).

Issued in Washington, D.C., on November 25, 1970.

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Motor Carrier Safety, Fed-  
eral Highway Administration.

[P.R. Doc. 70-16090; Filed, Dec. 1, 1970;  
8:45 a.m.]